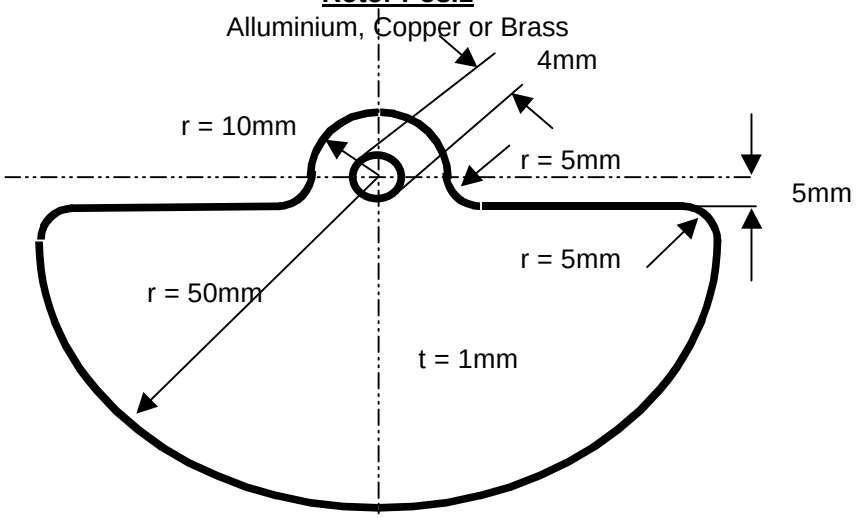
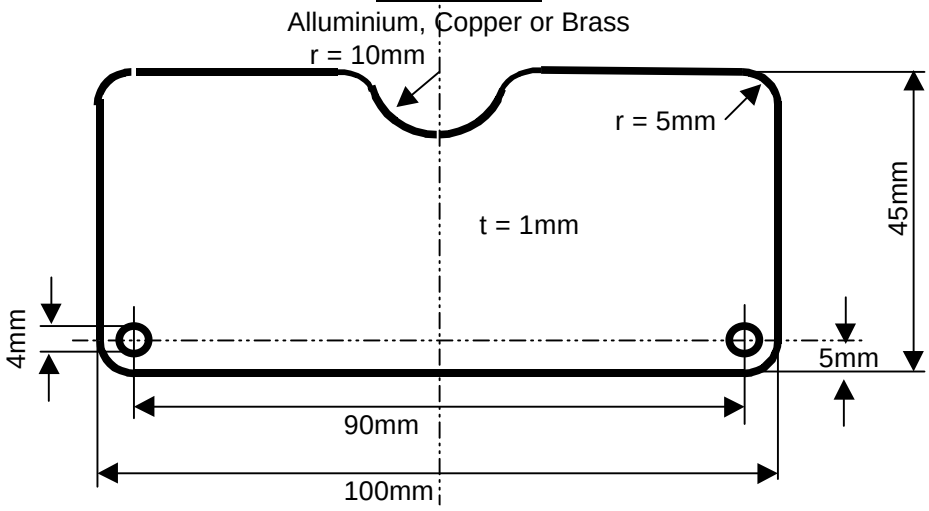
Building a high voltage (5KV), variable plate capacitor (17 to 220pF)

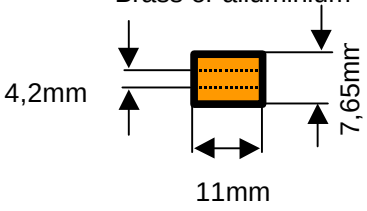
Rotor Pos.1



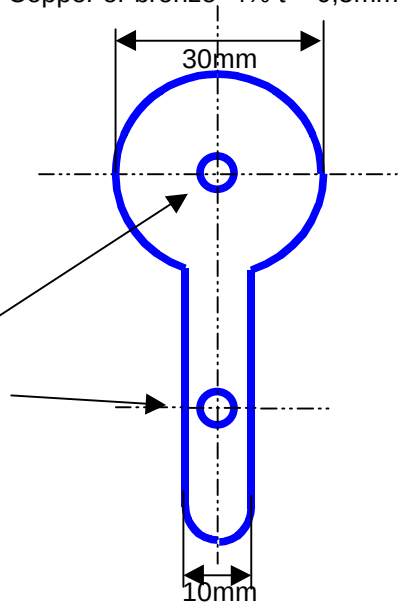
Stator Pos. 2



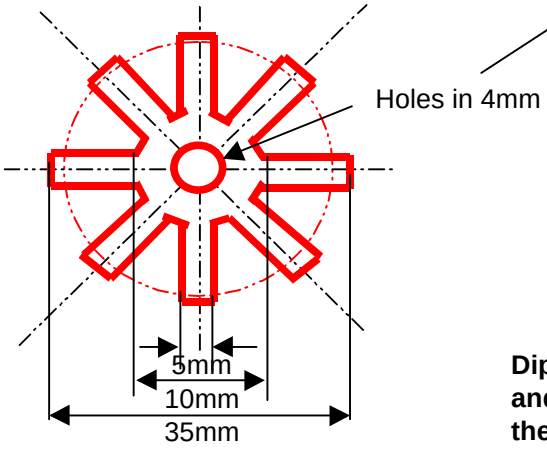
Distance rolls with a 4,2mm hole



Contackt plate Pos. 4

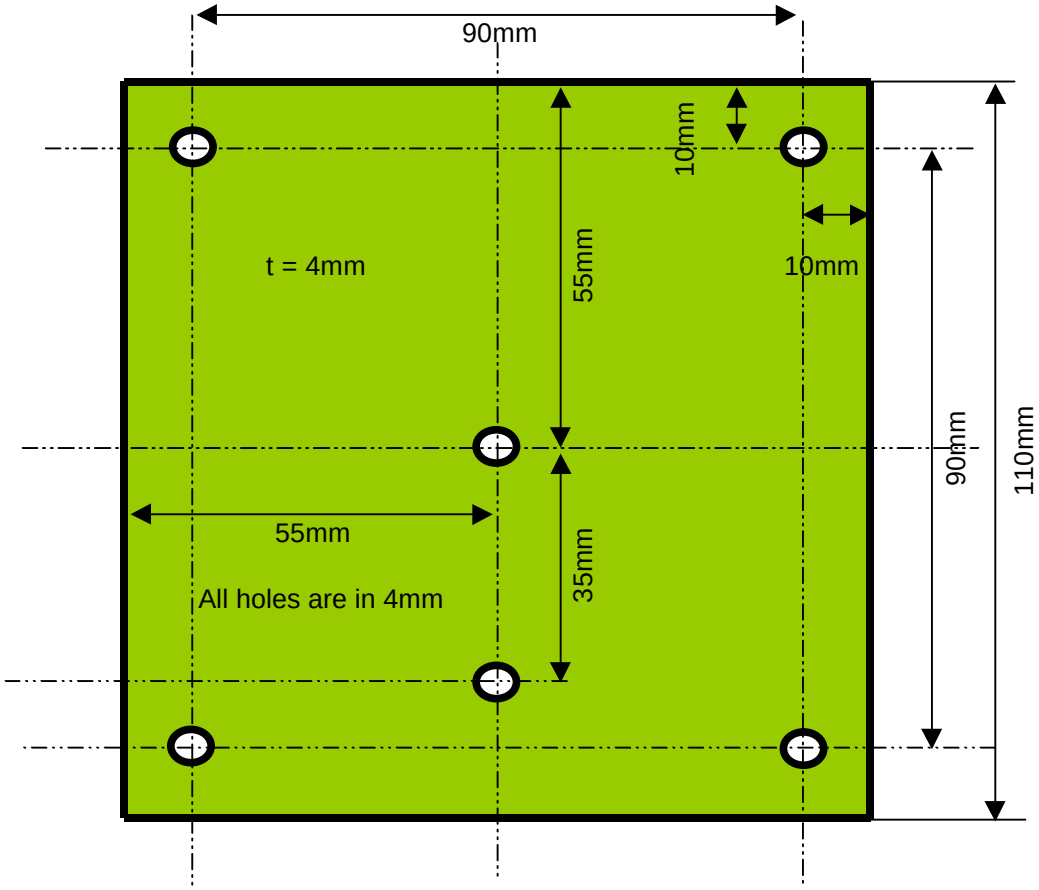


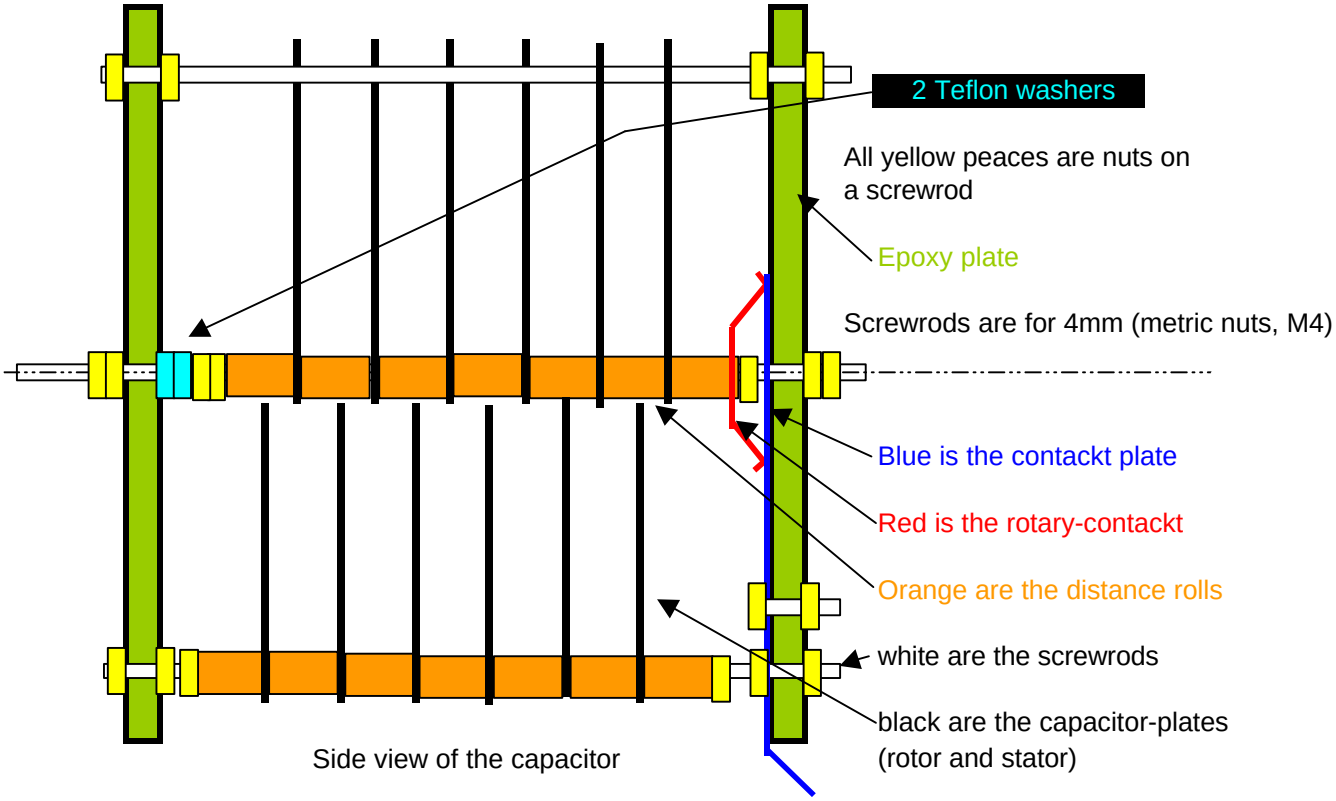
Rotary contackt Pos. 5



Dipending on the amount of needed stator and rotor plates, you have to dimension the screwrod to fit it.

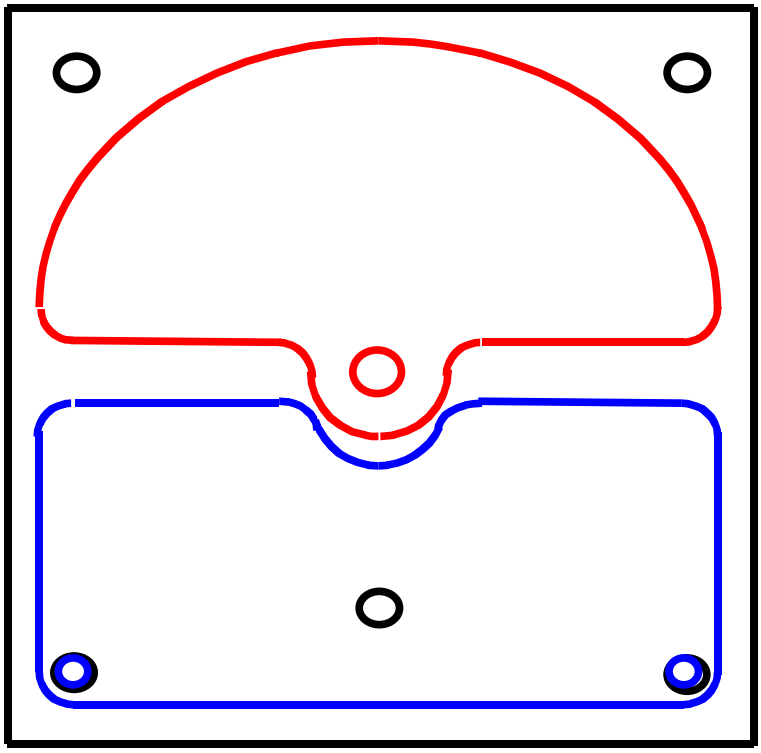
Front and reare isolation plates made of 4mm epoxy




2 Teflon washers
All yellow peaces are nuts on a screwrod
Epoxy plate
Screwrods are for 4mm (metric nuts, M4)
Blue is the contackt plate
Red is the rotary-contackt
Orange are the distance rolls
white are the screwrods
black are the capacitor-plates (rotor and stator)

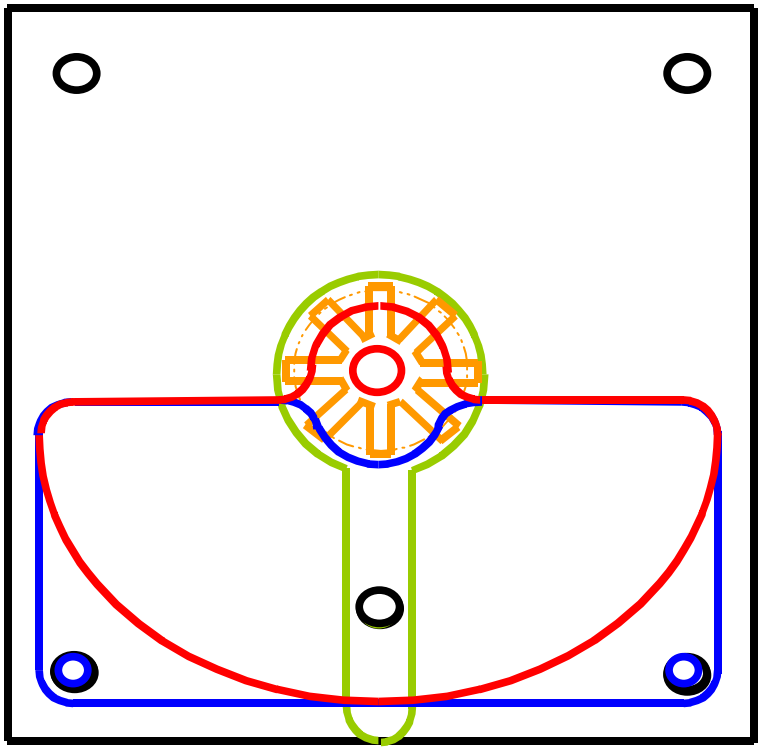
Side view of the capacitor

Front-view of the front and reare epoxy-sections with the components in place



To get a capacitance of about 220pf you need 10 stator and 9 rotor plates that means about 22pf per pair of plates.

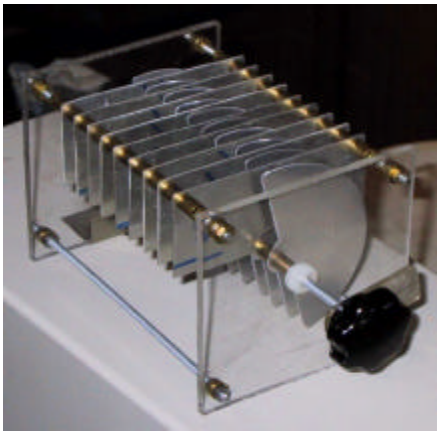
Plates at minimum capacitance

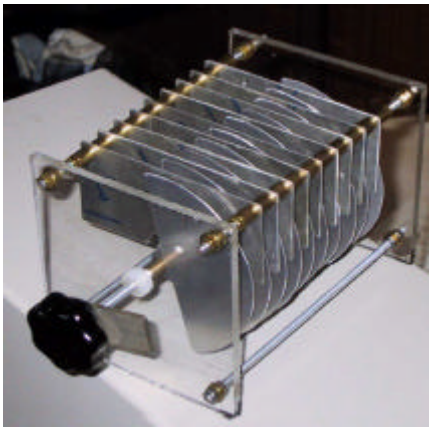


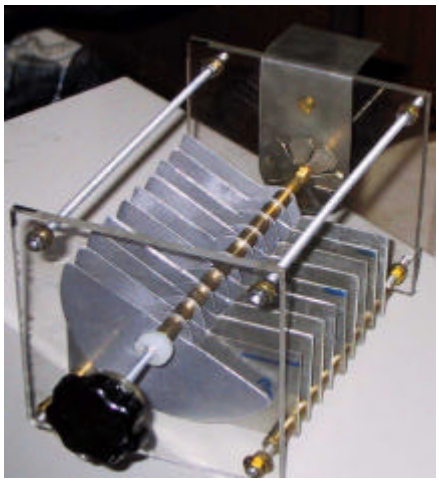
Here is a view of the components from the far backt to the front.....epoxy-plate (black).....contackt-plate (green).....rotary-contackt (orange)....stator-plate (blue)....rotor-plate (red).. And so on, continuing with the plates and their distance-rolls.

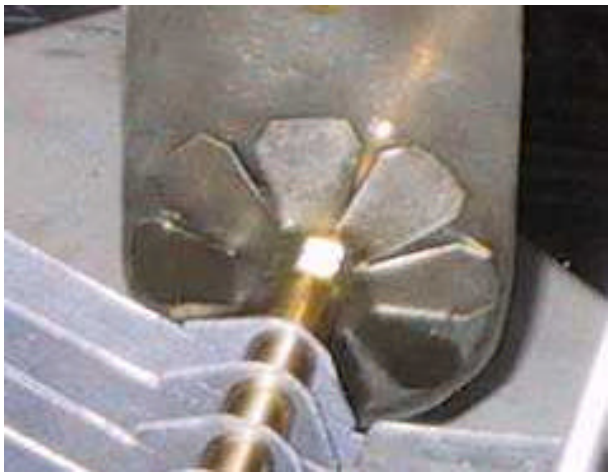
Plates at maximum capacitance

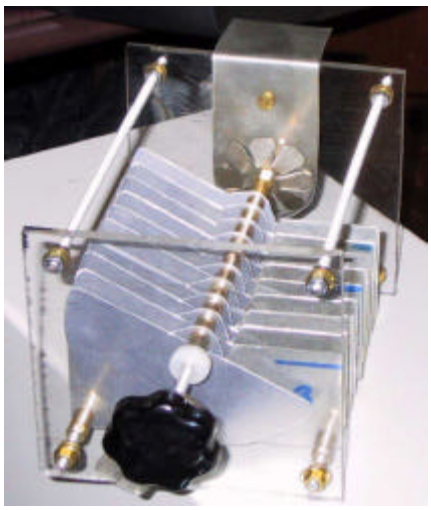
Here a few images in order to show you that the projeckt is possible, the isolation-plates here are made of plexiglas to have a better look on it.

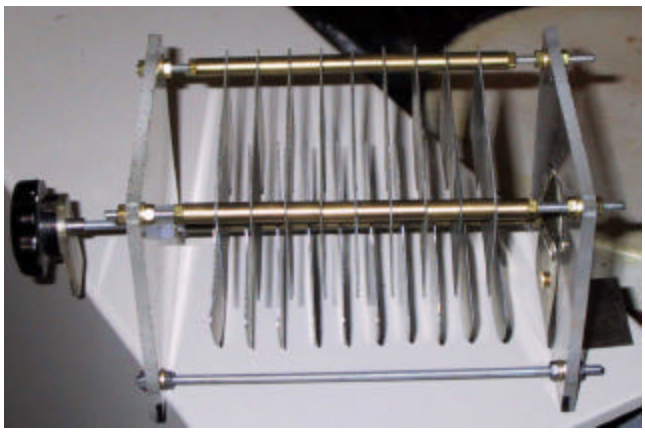












As you see it is possible, rotaiting is a bit harder then a commercial one but you need the pressure between the isolation-plates to get a good contackt from the rotary-section to the contackt-plate. I also used this homebrew variable capacitors for magnetic loops.

If you like this description, I would apprischiate a good note.
Please rate my sight at the DX-Zone
73 and good luck homebrewing this capacitor. DL 5 DBM, Anwar.